AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1   Claim 1 (Currently Amended): An inspection method of an electric part comprising the

2   steps of:

3   storing a plurality of images of a non-defective electric part in advance; [[and]]

4   <u>storing image consulting data including a plurality of item symbols wherein each of the</u>

5   <u>item symbols corresponds to at least one of the plurality of images;</u>

6   <u>storing normal data including a plurality of sections to be inspected, wherein each of the</u>

7   <u>sections to be inspected corresponds to at least one proper one of the item symbols; and</u>

8   judging whether or not an electric part to be inspected <u>at a section to be inspected</u> is non-

9   defective ~~on the basis of~~ <u>, in dependence upon</u> an image of the electric part to be inspected<u>, the</u>

10   <u>section to be inspected, the image consulting data,</u> and <u>the normal data</u> ~~a plurality of the images~~

11   ~~of a non-defective electric part~~.

1   Claim 2 (Currently Amended): An inspection method of an electric part comprising the

2   steps of:

3   storing a plurality of images of a non-defective electric part in advance;

4   storing image consulting data including a plurality of item symbols wherein each of the

5   item symbols corresponds to at least one of the plurality of images;

6   storing normal data including a plurality of sections to be inspected, wherein each of the

7   sections to be inspected corresponds to at least one proper one of the item symbols;

8   comparing an image of an electric part to be inspected at a section to be inspected and

9   [[a]] the plurality of the images of [[a]] the non-defective electric part;

10   extracting an image most analogous to the image of [[an]] the electric part to be inspected

11   from [[a]] the plurality of the images of [[a]] the non-defective electric part; and

12   judging whether or not the electric part to be inspected is non-defective on the basis of ,

13   in dependence upon the most analogous image, [[and]] the image of the electric part to be

14   inspected, the section to be inspected, the image consulting data, and the normal data.

1   Claim 3 (Original): An inspection apparatus of an electric junction box having a plurality

2   of mounts on which electric parts are mounted, for inspecting mounting state of the electric parts,

3   said each electric part having a different mark on an outer surface thereof depending upon an

4   item symbol thereof, the inspection apparatus comprising:

5   image pickup means for picking up an image including said mark of the electric part

6   mounted on the mount;

7   extraction means for (1) storing image consulting data containing a plurality of images

8   including said marks of the electric parts of all the item symbols to be mounted in the electric

9   junction box as a subject of the inspection and normal data indicating the proper item symbols of

10   the electric parts mounted on the corresponding mounts, and for (2) comparing the image

11   including said mark of the electric part mounted on the mount picked up by the image pickup

12   means and the image in the image consulting data, and for (3) extracting the item symbol of the

13   electric part having the most analogous image from the images in the image consulting data; and

14   judgment means for judging the quality of the mounting state of the electric parts on the

15   mount by comparing the item symbol of the electric part having the most analogous image and

16   said normal data.

1   Claim 4 (Original): The inspection apparatus of an electric junction box according to

2   claim 3, wherein the image is a digital information, in which an optical power is indicated with a

3   plurality of grades thereof,

4   the extraction means compares the image including said mark of the electric part mounted

5   on the mount in the electric junction box as a subject of the inspection and the image in the

6   image consulting data by a method of normalization correlation so that the image having the

7   highest correlation value obtained by the method of normalization correlation out of the images

8   is set up to be said most analogous image, and

9   the judgment means judges the quality of the mounting state of the electric parts on the

10   mount by comparing the item symbol of the electric part of the image having the highest

11   correlation value and said normal data.

1   Claim 5 (Currently Amended): An inspection apparatus of an electric junction box

2   having a plurality of mounts on which electric parts are mounted, for inspecting mounting state

3   of the electric parts, said each electric part having a different mark on an outer surface thereof

4   ~~depending upon~~ corresponding to an item symbol thereof, the inspection apparatus comprising:

5   image pickup means for picking up an image, including said mark, of [[the]] an electric

6   part mounted on [[the]] a mount to be inspected;

7   extraction means for (1) storing image consulting data including a plurality of item

8   symbols wherein each of the item symbols corresponds to at least one of a plurality of images of

9   non-defective electric parts ~~containing a plurality of images including said marks of the electric~~

10   ~~parts of all the item symbols to be mounted in the electric junction box as a subject of the~~

11   ~~inspection,~~ and storing normal data including a plurality of mounts to be inspected wherein each

12   of the mounts to be inspected corresponds to at least one proper one of the item symbols, and for

13   (2) comparing the image, including said mark, of the electric part mounted on the mount to be

14   inspected picked up by the image pickup means and the ~~image~~ images of the non-defective

15   electric parts ~~part having the proper item symbol to be mounted~~ in the image consulting data by a

16   method of normalization correlation, and for (3) extracting the highest correlation value out of

17   the correlation values obtained by the method of normalization correlation; and

18 judgment means for judging the quality of the mounting state of the electric parts on the

19 mount ~~on the basis of~~ in dependence upon the highest correlation value, the image consulting

20 data, and the normal data.

1 Claim 6 (Original): The inspection apparatus of an electric junction box according to

2 claim 4 or 5, wherein the judgment means adds the image including said mark of the electric part

3 properly mounted on the mount, out of the electric parts judged improperly mounted on the

4 mount, to the image consulting data.

1 Claim 7 (Currently Amended): An inspection apparatus of a terminal fittings for

2 inspecting mounting state of the terminal fittings on an insulator, said terminal fittings being

3 mounted at a mount to be inspected on the insulator and an electric wire being pressure-welded

4 to the terminal fittings, the inspection apparatus comprising:

5 image pickup means for picking up an image of the terminal fittings mounted at the

6 mount to be inspected on the insulator;

7 extraction means for (1) storing image consulting data including a plurality of item

8 symbols wherein each of the item symbols corresponds to at least one of a plurality of images of

9 ~~containing a plurality of images of a~~ non-defective terminal fittings mounted on the insulator, and

10 storing normal data including a plurality of mounts to be inspected wherein each of the mounts to

11 be inspected corresponds to at least one proper one of the item symbols, and for (2) comparing

12   the image of the terminal fittings picked up by the image pickup means and [[a]] the plurality of

13   the images of [[a]] non-defective terminal fittings in the image consulting data, and for (3)

14   extracting an image most analogous to the image of the terminal fittings picked up by the image

15   pickup means from the images in the image consulting data; and

16   judgment means for judging the quality of the mounting state of the terminal fittings on

17   the insulator ~~by comparing~~ in dependence upon the most analogous image, [[and]] the image of

18   the terminal fittings picked up by the image pickup means, the image consulting data, and the

19   normal data.

1   Claim 8 (Currently Amended): The inspection apparatus of a terminal fittings according

2   to claim 7, wherein the image is a digital information, in which an optical power is indicated with

3   a plurality of grades thereof,

4   the extraction means compares the image of the terminal fittings picked up by the image

5   pickup means and a plurality of the ~~image~~ images in the image consulting data by a method of

6   normalization correlation so that the image having the highest correlation value obtained by the

7   method of normalization correlation out of the images is set up to be said most analogous image,

8   [[and]]

9   the judgment means judges the quality of the mounting state of the terminal fittings

10   mounted at the mount to be inspected on the insulator to be good when the correlation value is

11   equal to or higher than a predetermined threshold ~~while~~ and the item symbol corresponding to the

12   image of the terminal fittings picked up by the image pickup means corresponds, according to the

13   normal data, to the proper item symbol for the mount to be inspected, and

14   the judgement means judges the quality of the mounting state to be no good when the

15   correlation value is lower than the predetermined threshold or when the item symbol

16   corresponding to the image of the terminal fittings picked up by the image pickup means does not

17   correspond, according to the normal data, to the proper item symbol for the mount to be

18   inspected.

1   Claim 9 (Currently Amended): An inspection apparatus of a terminal fittings for

2   inspecting pressure-welding state of an electric wire to the terminal fittings, said terminal fittings

3   being mounted at a mount to be inspected on an insulator and the electric wire being pressure-

4   welded to the terminal fittings, the inspection apparatus comprising:

5   image pickup means for picking up an image of the terminal fittings, to which the electric

6   wire is pressure-welded, mounted at the mount to be inspected on the insulator;

7   second extraction means for (1) storing second image consulting data including a plurality

8   of item symbols wherein each of the item symbols corresponds to at least one of a plurality of

9   images of ~~containing a plurality of images of~~ a non-defective terminal fittings, to which the

10   electric wire is pressure-welded, mounted on the insulator, and storing normal data including a

11   plurality of mounts to be inspected wherein each of the mounts to be inspected corresponds to at

12   least one proper one of the item symbols, and for (2) comparing the image of the terminal

9

13 fittings, to which the electric wire is pressure-welded, picked up by the image pickup means and

14 [[a]] the plurality of images of [[a]] non-defective terminal fittings, to which the electric wire is

15 pressure-welded, in the second image consulting data, and for (3) extracting an image most

16 analogous to the image of the terminal fittings, to which the electric wire is pressure-welded,

17 picked up by the image pickup means from the images in the second image consulting data; and

18 second judgment means for judging the quality of the pressure-welding state of the

19 electric wire to the terminal fittings, to which the electric wire is pressure-welded, mounted on

20 the insulator by comparing in dependence upon the most analogous image, [[and]] the image of

21 the terminal fittings, to which the electric wire is pressure-welded, mounted on the insulator

22 picked up by the image pickup means, the second image consulting data, and the normal data.

1 Claim 10 (Currently Amended): The inspection apparatus of a terminal fittings

2 according to claim 9, wherein the image is a digital information, in which an optical power is

3 indicated with a plurality of grades thereof,

4 the second extraction means compares the image of the terminal fittings, to which the

5 electric wire is pressure-welded, picked up by the image pickup means and [[a]] the plurality of

6 the images in the second image consulting data by a method of normalization correlation so that

7 the image having the highest correlation value obtained by the method of normalization

8 correlation out of the images is set up to be said most analogous image, and

9 the second judgment means judges the quality of the pressure-welding state of the electric

10   wire to the terminal fittings <u>mounted at the mount to be inspected</u> to be good when the

11   correlation value is equal to or higher than a predetermined threshold <u>and the item symbol</u>

12   <u>corresponding to the image of the terminal fittings picked up by the image pickup means</u>

13   <u>corresponds, according to the normal data, to the proper item symbol for the mount to be</u>

14   <u>inspected, and</u>

15   the judgment means <s>while</s> judges the quality of the pressure-welding state to be no good

16   when the correlation value is lower than the predetermined threshold <u>or when the item symbol</u>

17   <u>corresponding to the image of the terminal fittings picked up by the image pickup means does</u>

18   <u>not, according to the normal data, correspond to the proper item symbol for the mount to be</u>

19   <u>inspected</u>.

1   Claim 11 (Currently Amended): An inspection apparatus of a terminal fittings for

2   inspecting mounting state of the terminal fittings on an insulator and pressure-welding state of an

3   electric wire, said terminal fittings being mounted <u>at a mount to be inspected</u> on the insulator and

4   the electric wire being pressure-welded to the terminal fittings, the inspection apparatus

5   comprising:

6   image pickup means for picking up an image of the terminal fittings mounted <u>at the</u>

7   <u>mount to be inspected</u> on the insulator;

8   extraction means for (1) storing image consulting data <u>including a plurality of item</u>

9   <u>symbols wherein each of the item symbols corresponds to at least one of a plurality of images of</u>

11

10   ~~containing a plurality of images of a~~ non-defective terminal fittings mounted on the insulator, and

11   storing normal data including a plurality of mounts to be inspected wherein each of the mounts to

12   be inspected corresponds to at least one proper one of the item symbols, and for (2) comparing

13   the image of the terminal fittings picked up by the image pickup means and [[a]] the plurality of

14   the images of [[a]] non-defective terminal fittings in the image consulting data, and for (3)

15   extracting an image most analogous to the image of the terminal fittings picked up by the image

16   pickup means from the images in the image consulting data;

17   judgment means for judging the quality of the mounting state of the terminal fittings on

18   the insulator ~~by comparing~~ in dependence upon the most analogous image, [[and]] the image of

19   the terminal fittings picked up by the image pickup means, the image consulting data, and the

20   normal data;

21   second extraction means for (1) storing second image consulting data containing a

22   plurality of images of a non-defective terminal fittings, to which the electric wire is pressure-

23   welded, mounted on the insulator, and for (2) comparing the image of the terminal fittings, to

24   which the electric wire is pressure-welded, picked up by the image pickup means and a plurality

25   of images of a non-defective terminal fittings, to which the electric wire is pressure-welded, in

26   the second image consulting data, and for (3) extracting an image most analogous to the image of

27   the terminal fittings, to which the electric wire is pressure-welded, picked up by the image pickup

28   means from the images in the second image consulting data; and

29   second judgment means for judging the quality of the pressure-welding state of the

30   electric wire to the terminal fittings, to which the electric wire is pressure-welded, mounted on

31   the insulator by comparing the most analogous image and the image of the terminal fittings, to

32   which the electric wire is pressure-welded, mounted on the insulator picked up by the image

33   pickup means.

1   Claim 12 (Currently Amended): The inspection apparatus of a terminal fittings according

2   to claim 11, wherein the image is a digital information, in which an optical power is indicated

3   with a plurality of grades thereof,

4   the extraction means compares the image of the terminal fittings picked up by the image

5   pickup means and a plurality of the image in the image consulting data by a method of

6   normalization correlation so that the image having the highest correlation value obtained by the

7   method of normalization correlation out of the images is set up to be said most analogous image,

8   the judgment means judges the quality of the mounting state of the terminal fittings on the

9   insulator to be good when the correlation value is equal to or higher than a predetermined

10   threshold and the item symbol corresponding to the image of the terminal fittings picked up by

11   the image pickup means corresponds, according to the normal data, to the proper item symbol for

12   the mount to be inspected, and

13   the judgment means ~~while~~ judges the quality of the mounting state to be no good when

14   the correlation value is lower than the predetermined threshold or when the item symbol

15   corresponding to the image of the terminal fittings picked up by the image pickup means does

16 not, according to the normal data, correspond to the proper item symbol for the mount to be

17 inspected,

18 the second extraction means compares the image of the terminal fittings, to which the

19 electric wire is pressure-welded, picked up by the image pickup means and a plurality of the

20 images in the second image consulting data by a method of normalization correlation so that the

21 image having the highest correlation value obtained by the method of normalization correlation

22 out of the images is set up to be said most analogous image, and

23 the second judgment means judges the quality of the pressure-welding state of the electric

24 wire to the terminal fittings to be good when the correlation value is equal to or higher than a

25 predetermined threshold while judges the quality of the pressure-welding state to be no good

26 when the correlation value is lower than the predetermined threshold.

1 Claim 13 (Original): The inspection apparatus of a terminal fittings according to claim 7,

2 8, 11 or 12, wherein the terminal fittings has a pressure-welding part to which the electric wire is

3 pressure-welded and a caulking piece for caulking the electric wire,

4 the image pickup means picks up at least one image out of an image of the pressure-

5 welding part and that of the caulking piece,

6 the image consulting data includes at least one plurality of images out of images of the

7 pressure-welding part and those of the caulking piece, and

8 the extraction means compares at least one image out of an image of the pressure-welding

9   part and that of the caulking piece, which are picked up by the image pickup means, with at least

10   one plurality of images out of images of the pressure-welding part and those of the caulking

11   piece, which are included in the image consulting data.

1   Claim 14 (Original): The inspection apparatus of a terminal fittings according to claim 9,

2   10, 11 or 12, wherein the terminal fittings has a pressure-welding part to which the electric wire

3   is pressure-welded and a caulking piece for caulking the electric wire,

4   the image pickup means picks up at least one image out of an image of the pressure-

5   welding part to which the electric wire was pressure-welded and that of the caulking piece which

6   caulked the electric wire,

7   the second image consulting data includes at least one plurality of images out of images

8   of the pressure-welding part to which the electric wire was pressure-welded and those of the

9   caulking piece which caulked the electric wire, and

10   the extraction means compares at least one image out of an image of the pressure-welding

11   part to which the electric wire was pressure-welded and that of the caulking piece which caulked

12   the electric wire, which are picked up by the image pickup means, with at least one plurality of

13   images out of images of the pressure-welding part to which the electric wire was pressure-welded

14   and those of the caulking piece which caulked the electric wire, which are included in the second

15   image consulting data.

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